



for GM Linden

NJD 002 186 690

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August 30, 2013

Mr. Gary Greulich
New Jersey Department of Environmental Protection
Northern Regional Office
7 Ridgedale Avenue
Cedar Knolls, NJ 07927

RE: Remedial Action Progress Report No. 16 for the Retail Redevelopment Area Portion of the Former General Motors (GM) Linden Assembly Plant, 1016 West Edgar Road, Linden, Union County, New Jersey 07036; DUK059.701.0147.

Dear Mr. Greulich:

On May 26, 2009, the New Jersey Department of Environmental Protection (NJDEP) approved the New Jersey Remedial Action Workplan and RCRA Corrective Measures Proposal Addendum No. 1 (RAWP) for the Retail Redevelopment Area of the Former GM Linden Assembly Plant (Site; SRP PI# 014755; EA ID# SUB090001; BFO File Number: 20-09-24). The May 26, 2009 approval letter requested a Remedial Action Progress Report for the Retail Redevelopment Area on/by November 30, 2009. Subsequent reports are submitted on a quarterly basis.

This letter constitutes Remedial Action Progress Report No. 16 for the Retail Redevelopment Area. Hull & Associates, Inc. (Hull) has prepared this report on behalf of Linden Development LLC (Linden Development) to summarize remedial activities completed on the Site between May 31, 2013 and August 31, 2013.

Requirements, according to N.J.A.C. 7:26E-6.6, are shown below in **bold italics**, with Hull/Linden Development's update following. The report certification required by N.J.A.C. 7:26E-1.5 is included in Attachment A.

1. ***NJDEP requires a description of each planned remedial action***
 - i. ***scheduled to be initiated or completed within the reporting period***
 - ii. ***actually initiated or completed during the reporting period; and***
 - iii. ***scheduled but not initiated or not completed during the reporting period, including the reasons for the noncompliance with the approved schedule.***

Soil

As outlined in the approved RAWP, the remedial activities for soils on the Retail Redevelopment Area consist of the following:

- a. Establishing deed restrictions or environmental covenants to maintain commercial/industrial land use at the Site;
- b. Regrading the site to achieve the grade necessary to support the proposed redevelopment;



- c. Constructing building slabs, parking areas and roadways and placing one foot of clean soil over geotextile fabric in future greenspaces to preclude direct contact exposures to future receptor populations and/or provide cover to historical fill material; and
- d. Surveying to demonstrate that all areas are covered with engineering controls (e.g., building slabs, parking areas and roadways) or one foot of clean soil.

These remedial activities are directly related to construction activities associated with the future redevelopment at the Site which are dependent upon finalization of agreements with end users. Linden Development has been working throughout the reporting period to finalize agreements with several end users that will ultimately occupy various portions of the Site. Given that end user agreements have not been finalized, significant construction activities described in the RAWP have not yet been initiated. Construction support activities that were conducted during the reporting period included importing fill material, as discussed below.

Fill Material Import Activities

As outlined in previous quarterly reports, Linden Development imported structural fill materials and cover soils from off-site sources for use during the redevelopment consistent with the RAWP and the Revised Soil and Concrete Reuse Proposal (Revision 1.0) approved by NJDEP. During the reporting period, approximately 17,142 cubic yards (cy) of fill material were imported from two sources:

1. Crushed aggregate from Impact Recovery and Reuse Center in Lyndhurst, NJ, which is an NJDEP-licensed Class B recycling center.
2. Granular fill from a construction project associated with the development of the Jersey City Municipal Service Complex (JCMSC) located on Linden Avenue in Jersey City, NJ.

Crushed aggregate imported from Impact Recovery and Reuse Center is sourced by an NJDEP-licensed Class B recycling center. Pursuant to the approved RAWP, characterization sampling for materials obtained from licensed Class B facilities is not required beyond that which is required pursuant to the facility's license. The fill supplier conducted characterization and quality assurance sampling and results indicate that no parameters are present above applicable standards. The fill supplier's certification package with laboratory reports is provided on the compact disc in Attachment B.

The material from the JCMSC consists of granular fill (brick, sand, gravel and silt) from a construction project. The fill supplier provided a screening package with material characterization sampling results that indicate no parameters are present above applicable standards. However, the sampling frequency from the screening package was not sufficient to satisfy the requirements of the approved RAWP. Therefore, material from the JCMSC is currently placed in a quarantine area of the Linden Development Site, and the fill supplier is required to conduct additional quality assurance (QA) sampling before the material is used as structural fill. In the unlikely event that any material is deemed inappropriate for use based on the QA sampling results, the fill supplier is required to remove the material from the Linden Development Site. To date, 8,011 cubic yards of material have been imported

from the JCMSC and the analysis of the QA samples is in process. The laboratory results from the screening sampling are provided on the compact disc in Attachment B. The laboratory results from the additional QA samples will be presented in a future report.

As indicated in the previous quarterly report, 1,300 cubic yards of granular fill was previously imported from the South Waterfront Site in Hoboken, NJ and held in a quarantine location while additional QA sampling and analysis was completed. The analytical results for the additional QA sampling were received during the current reporting period and indicate that the material meets the acceptance criteria for the Site. Analytical results and the associated laboratory reports are provided on the compact disc in Attachment B.

Table 1 provides a summary of the materials imported to date. All materials imported to the Retail Redevelopment Area during the reporting period were stockpiled for future use, with the exception of the JCMSC. As discussed above, the JCMSC was placed in a quarantine area pending results from additional QA sampling that was conducted to meet the required sampling frequency specified in the RAWP.

Groundwater

As outlined in the approved RAWP, remedial actions related to groundwater underlying the overall Retail Redevelopment Area do not appear to be necessary. However, sporadic historical concentrations of lead in limited monitoring wells have exceeded groundwater quality criteria at the Site, as observed in previous groundwater sampling data. As a result, the NJDEP may consider that an indeterminate Classification Exception Area (CEA) is necessary due to these sporadic exceedances and the presence of historical fill at the Site. Based on discussions with Mr. Greulich conducted since November 2009, the indeterminate CEA will be established by NJDEP as part of finalizing the Site NFA and will include the overburden aquifer within the Site boundaries. As discussed on November 18, 2009 and reiterated during ongoing quarterly meetings, Mr. Greulich currently maintains the information necessary to establish the indeterminate CEA (if ultimately deemed necessary) and no additional submittals by Linden Development are required.

As discussed in the previous quarterly report, Linden Development performed additional sampling within the proposed Walmart parcel as part of internal due diligence requirements for Walmart ground lease negotiations. These additional sampling activities were completed over several phases, and the sampling results were previously provided to NJDEP under separate covers. Based on the additional sampling results, trichloroethene (TCE) was detected in groundwater at concentrations exceeding the NJDEP Class IIa groundwater standard within a limited portion of the Walmart parcel near the northeast corner of the proposed Walmart building footprint. Evaluation of potential groundwater response actions associated with TCE detected in shallow groundwater within a limited portion of the Walmart parcel is outlined in a groundwater monitoring plan currently under review by NJDEP.

Storm Sewer (AOI-18)

Remedial activities associated with AOI-18 are complete, as documented in Remedial Action Progress Report No. 1 (November 2009).

- 2. NJDEP requires discussion of problems and delays in the implementation of the RAWP, which should include proposals for corrections.**

As discussed above, remedial activities are directly related to construction activities associated with the future redevelopment at the Site which are dependent upon finalization of agreements with end users. Given current economic conditions, the construction activities described in the RAWP will not be implemented until redevelopment deals with end users are finalized.

Linden Development is continuing to pursue finalization of agreements with several end users for the Retail Redevelopment Area. In the interim, conditions at the Site are stable given that GM's original cover types (asphalt, building pads, etc.) remain intact.

3. NJDEP requires proposals for a deviation from, or modification to, the approved RAWP.

No deviations from, or modifications to, the approved RAWP are planned or required at this time. In the event that additional groundwater response actions related to TCE in shallow groundwater at the Walmart parcel are determined to be required, Linden Development and Hull will work with NJDEP to promptly amend the approved RAWP.

4. NJDEP requires submittal of a revised schedule pursuant to N.J.A.C. 7:26E-6.5, to reflect the changes as noted in 1 through 3 above.

As discussed with Gary Greulich during previous quarterly meetings, implementation of the site earthwork activities is dependent on finalization of development agreements with end users. Agreements with end users are progressing, but finalization of agreements and the start of site earthwork activities are being delayed by the final appeals process associated with site plan and zoning approvals. Due to the appeals process, work anticipated to begin previously has been delayed. Linden Development will provide NJDEP with a more detailed schedule as the legal appeals are finalized.

5. NJDEP requires an updated status of all permit applications relative to the critical path schedule.

The permits required for initiation of the remedial activities are summarized below.

Permit/Approval Type	Status	Notes
Planning Board Approval	Approved 1/9/09	Site plan approved by City of Linden Planning Board
NPDES Permit (Storm Water)	Approved 9/16/09	NPDES Permit No. 0088323
Soil Conservation District	Approved 9/16/09	Approved by Somerset-Union Conservation District

6. NJDEP requires a listing of each remedial action to be performed during the next reporting period.

Agreements with end users are progressing, but finalization of agreements and the start of site earthwork activities are being delayed by the final appeals process associated with site plan and zoning approvals. Due to the appeals process, work anticipated to begin previously has been delayed. Linden Development will provide NJDEP with a more detailed schedule as the legal appeals are finalized.

Linden Development anticipates continuing to import fill material during the next reporting period.

7. NJDEP requires costs of each remedial action

- I. Annual summary of all remedial action costs incurred to date; and***
- II. Revised cost estimate for remedial actions remaining to be performed.***

Given that significant construction and remedial implementation has not yet commenced, significant remedial costs have not yet been accrued, with the exception of minor costs for the storm sewer cleaning (i.e., approximately \$7,000) reported in Remedial Action Progress Report No. 1.

The cost estimate for completing remedial activities remains consistent with that presented in the RAWP (i.e., approximately \$7,500,000 for earthwork and construction of engineering controls).

8. NJDEP requires a tabulation of sampling results (according to N.J.A.C. 7:26E-3.13(c)3) received during the reporting period and a summary of the data and any conclusions, presented in a format consistent with N.J.A.C. 7:26E-4.8.

The fill supplier's certification packages with laboratory reports related to QA sampling of fill material from the Impact Recovery and Reuse Center (NJDEP-licensed Class B recycling center) and South Waterfront Site are provided on the compact disc in Attachment B.

9. NJDEP requires a summary of active groundwater remedial actions

- I. groundwater elevation maps with groundwater flow shown immediately before and during active groundwater remediation;***
- II. graphs depicting changes in concentrations over time for all impacted wells as well as all down-gradient wells;***
- III. summary of volume of water treated since last reporting period and the total volume treated since active remedial action commenced; and***
- IV. Summary of groundwater contamination, indicating either that contamination remains above applicable standards (include a proposal detailing additional remedial actions) or that concentrations are below applicable standards.***

As outlined in the approved RAWP, remedial actions related to groundwater underlying the Retail Redevelopment Area do not appear to be necessary (see discussion under item 1). In the event that additional groundwater response actions are required due to the TCE discovered in shallow groundwater at the Walmart parcel, Linden Development and Hull will work with NJDEP to promptly amend the approved RAWP.

10. NJDEP requires a summary of natural remediation groundwater remedial actions

- I. Summary table of the groundwater monitoring results collected; and***
- II. Conclusions whether data indicate that natural remediation is no longer appropriate (must then also submit a revised RAWP)***

As outlined in the approved RAWP, remedial actions related to groundwater underlying the Retail Redevelopment Area do not appear to be necessary (see discussion under item 1). In the event that additional groundwater response actions are required due to the TCE discovered in shallow groundwater at the Walmart parcel, Linden Development and Hull will work with NJDEP to promptly amend the approved RAWP.

11. NJDEP requires a description of all wastes generated as a result of the remedial action

- i. Tabulation of waste characterization samples collected, including the physical state of the material, volume, number of samples, analyses performed and results;**
- ii. Listing of types and quantities of waste generated by the remedial action during the reporting period as well as to date;**
- iii. Name of the disposal facility used;**
- iv. Transporters' dates of disposal; and**
- v. Manifest numbers of each waste shipment.**

No wastes were generated during the reporting period.

12. NJDEP requires that any additional support documentation that is available also be provided (photos, etc.).

Given that the majority of the remedial activities have not yet been implemented, no additional support documentation is available.

The next scheduled remedial action progress report will include remedial actions completed between August 31, 2013 and November 30, 2013. Please feel free to contact Bill Dennis at (412) 446-0315 with any questions regarding the update provided herein.

Sincerely,



Bill Dennis
Senior Project Manager

Attachments

ct: Clifford Ng – U.S. EPA Region 2
Brian Strohl – Linden Development, LLC
Joseph M. Sorge – J.M. Sorge, Inc.

TABLE

**LINDEN DEVELOPMENT LLC SITE (FORMER GM LINDEN ASSEMBLY PLANT)
1016 WEST EDGAR ROAD, LINDEN, NJ
QUARTERLY REPORT NO. 16 - RETAIL REDEVELOPMENT AREA**

**TABLE 1
SUMMARY OF FILL MATERIALS IMPORTED AS OF AUGUST 23, 2013**

Import Date	Source	Supplier	Quantity ¹	Material Type	Anticipated Site Use
Soils and Crushed Concrete - Imported Prior to Current Reporting Period ²					
Pre-February 2010	City of Rahway, NJ - Former firing range soil stockpile	City of Rahway, NJ	800 cy	Soils	Structural fill to be covered by engineering controls
Pre-February 2010	City of Linden, NJ - 2300 S. Wood Street - soil stockpile from City's Parks Dept.	City of Linden, NJ	2,865 cy	Soils	Structural fill to be covered by engineering controls
April / May 2010	New 121st. Police Precinct -970 Sanders Street, Staten Island, NY - excess soils from construction project	Pure Earth, Inc.	2,973 cy	Soils	Structural fill to be covered by engineering controls
April / May 2010	Newark Public Schools Stadium - excess soils from construction project	AWT Environmental Services, Inc.	3,397 cy	Soils	Structural fill to be covered by engineering controls
May 2010	Newark Brick Tower - Residential Tower Demolition - processed backfill material	DEMREX and Altchem Environmental	15,680 cy	Soils/Crushed Concrete	Structural fill to be covered by engineering controls
June 2010	New 121st. Police Precinct -970 Sanders Street, Staten Island, NY - excess soils from construction project	Pure Earth, Inc.	1,178 cy	Soils	Structural fill to be covered by engineering controls
June 2010	City of Linden, NJ - Library Site - excess soils from construction project	City of Linden, NJ	2,300 cy	Soils	Structural fill to be covered by engineering controls
July 2010	New 121st. Police Precinct -970 Sanders Street, Staten Island, NY - excess soils from construction project	Pure Earth, Inc.	1,516 cy	Soils	Structural fill to be covered by engineering controls
8/24/10	New 121st. Police Precinct -970 Sanders Street, Staten Island, NY - excess soils from construction project	Pure Earth, Inc.	658 cy	Soils	Structural fill to be covered by engineering controls
9/23/10	New 121st. Police Precinct -970 Sanders Street, Staten Island, NY - excess soils from construction project	Pure Earth, Inc.	567 cy	Soils	Structural fill to be covered by engineering controls
9/27/2010	Weldon Materials - crushed stone (virgin source)	Weldon Materials	142 cy	Crushed Stone	Unrestricted (Virgin Source Material)
9/29/2010	Weldon Materials - crushed stone (virgin source)	Weldon Materials	55 cy	Crushed Stone	Unrestricted (Virgin Source Material)
10/5/10	New 121st. Police Precinct -970 Sanders Street, Staten Island, NY - excess soils from construction project	Pure Earth, Inc.	699 cy	Soils	Structural fill to be covered by engineering controls
10/19/10	New 121st. Police Precinct -970 Sanders Street, Staten Island, NY - excess soils from construction project	Pure Earth, Inc.	655 cy	Soils	Structural fill to be covered by engineering controls
12/15/10	New 121st. Police Precinct -970 Sanders Street, Staten Island, NY - excess soils from construction project	Pure Earth, Inc.	328 cy	Soils	Structural fill to be covered by engineering controls
12/16/10	New 121st. Police Precinct -970 Sanders Street, Staten Island, NY - excess soils from construction project	Pure Earth, Inc.	165 cy	Soils	Structural fill to be covered by engineering controls
2/17/12 through 5/15/12	MTA/LIRR East Side Access Project - native sand and gravel from installation of new railroad tunnels	Impact Environmental	10,176 cy	Soils	Unrestricted (Virgin Source Material)

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**TABLE 1
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Import Date	Source	Supplier	Quantity ¹	Material Type	Anticipated Site Use
2/17/12 through 5/15/12	Impact Recovery and Reuse center (NJDEP Class B Recycling Facility)	Impact Environmental	4,987 cy	Soils	Structural fill to be covered by engineering controls
5/16/12 through 8/17/12	400 Park Avenue South New York, NY	Impact Environmental	4,457 cy ³	Soils	Unrestricted (Virgin Source Material)
5/16/12 through 8/17/12	MTA/LIRR East Side Access Project - native sand and gravel from installation of new railroad tunnels	Impact Environmental	55 cy	Soils	Unrestricted (Virgin Source Material)
5/16/12 through 8/17/12	Impact Recovery and Reuse center (NJDEP Class B Recycling Facility)	Impact Environmental	5,066 cy	Soils	Structural fill to be covered by engineering controls
8/18/12 through 11/21/12	400 Park Avenue South New York, NY	Impact Environmental	4,582 cy ⁴	Soils	Unrestricted (Virgin Source Material)
8/18/12 through 11/21/12	Impact Recovery and Reuse center (NJDEP Class B Recycling Facility)	Impact Environmental	5,163 cy	Soils	Structural fill to be covered by engineering controls
11/22/12 through 2/15/13	400 Park Avenue South New York, NY	Impact Environmental	2,188 cy ⁵	Soils	Unrestricted (Virgin Source Material)
2/16/13 through 5/14/13	Impact Recovery and Reuse center (NJDEP Class B Recycling Facility)	Impact Environmental	811 cy	Soils	Structural fill to be covered by engineering controls
2/16/13 through 5/14/13	South Waterfront - 3rd Street and Frank Sinatra Dr., Hoboken, NJ - excess soils from construction project.	Impact Environmental	1,291 cy ⁶	Soils	Structural fill to be covered by engineering controls
		Subtotal:	72,754 cy		
Soils and Crushed Concrete - Imported During Current Reporting Period					
5/15/13 through 8/23/13	Impact Recovery and Reuse center (NJDEP Class B Recycling Facility)	Impact Environmental	9,131 cy	Soils	Structural fill to be covered by engineering controls
5/15/13 through 8/23/13	Jersey City Municipal Center, Jersey City, NJ - excess soils from construction project	Impact Environmental	8,011 cy ⁷	Soils	Structural fill to be covered by engineering controls; Material is currently placed in a quarantine area pending results of additional quality assurance sampling that was conducted to meet the required sampling frequency specified in the RAWP.
		Subtotal:	17,142 cy		
	Total for Soils and Crushed Concrete Imported to Date:		89,896 cy		

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**TABLE 1
SUMMARY OF FILL MATERIALS IMPORTED AS OF AUGUST 23, 2013**

Import Date	Source	Supplier	Quantity ¹	Material Type	Anticipated Site Use
Asphalt Millings - Imported Prior to Current Reporting Period					
Pre-February 2010	City of Linden, NJ - Residential Streets - asphalt millings	City of Linden, NJ	1,434 cy	Asphalt Millings	Subgrade material for future paved areas
		Subtotal:	1,434 cy		
Asphalt Millings - Imported During Current Reporting Period					
NA	None during current reporting period	NA	0 cy		
		Subtotal:	0 cy		
	Total for Asphalt Millings Imported to Date:		1,434 cy		

Notes:

- Quantity estimated based on import weight tickets and a conversion factor of 1.5 tons per cubic yard.
- Materials imported prior to 2011 were stockpiled in the Industrial #1 Redevelopment Area, but the final disposition at the overall site was not yet determined. As such, the pre-2011 materials are included in the volume totals for both the Retail Redevelopment Area and Industrial #1 Redevelopment Area. Starting in 2011, imported materials were placed directly within the specific redevelopment area where the material will ultimately be used.
- The imported material from this source totaled 773 cy and was stockpiled between the Industrial #1 and Retail Redevelopment Areas. The volume shown is 50% of the total volume imported (the other 50% was allocated to the Industrial #1 Redevelopment Area).
- The imported material from this source totaled 9,164 cy and was stockpiled between the Industrial #1 and Retail Redevelopment Areas. The volume shown is 50% of the total volume imported (the other 50% was allocated to the Industrial #1 Redevelopment Area).
- The imported material from this source totaled 2,713 cy and was stockpiled between the Industrial #1 and Retail Redevelopment Areas. The volume shown is the estimated portion stockpiled in Retail. The balance (estimated 525 cy) was stockpiled in the Industrial #1 Redevelopment Area.
- The imported material from this source totaled 2,583 cy and was stockpiled between the Industrial #1 and Retail Redevelopment Areas. The volume shown is the estimated portion stockpiled in Retail. The balance (estimated 1,291 cy) was stockpiled in the Industrial #1 Redevelopment Area.
- The imported material from this source totaled 13,352 cy and was stockpiled between the Industrial #1 and Retail Redevelopment Areas. The volume shown is the estimated portion stockpiled in Retail. The balance (estimated 5,341 cy) was stockpiled in the Industrial #1 Redevelopment Area.

ATTACHMENT A
Report Certification

Certification


**Linden Development, LLC
ISRA Case Number E20040531**

I certify under penalty of law that I have personally examined and am familiar with the information submitted herein and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, to the best of my knowledge, I believe that the submitted information is true, accurate and complete. I am aware that there are significant civil penalties for knowingly submitting false, inaccurate or incomplete information and that I am committing a crime of the fourth degree if I make a written false statement which I do not believe to be true. I am also aware that if I knowingly direct or authorize the violation of any statute, I am personally liable for the penalties.

Linden Development, LLC

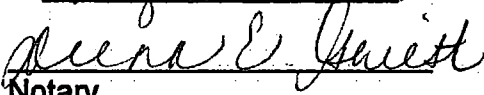
By:

Date: 8/28/13



William J. DeBoer, Executive V.P.

Sworn to and subscribed to before
me on this 28th day
of August, 2013



Notary



Deena E. Griest
Notary Public-State of Ohio
My Commission Expires
May 29, 2017

ATTACHMENT B

Compact Disc with Laboratory Results

1. Fill Material Certification Package and Laboratory Reports for Lyndhurst Class B Recycling Facility
2. Fill Material Certification Package and Laboratory Reports for Screening Data from Jersey City Municipal Service Center
3. Fill Material Certification Package and Laboratory Reports for South Waterfront Site